

FORM PTO-1449 U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use Several Sheets if Necessary)

(37 CFR 1.804)

ATTORNEY DOCKET NO.:  
LAA-103US

APPLICATION NO.:  
10/607,111

APPLICANT:

Wei Helen Li, et al.

FILING DATE:

June 27, 2003

GROUP:

1771

**U.S. PATENT DOCUMENTS**

EXAMINER'S INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE

**NON-U.S. PATENT DOCUMENTS**

	DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUB CLASS	TRANSLATION YES NO

**OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)**

KS			T. Agag, et al, "Effect of Hydroxyphenylmaleimide on the Curing Behaviour and Thermomechanical Properties of Rubber-Modified Polybenzoxazine", Institute of Physics Publishing, High Perform. Polym., 13, S327-S342 (2001) Dec.

EXAMINER:

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Initial citation considered. Draw line through citation if not in conformance and not considered.  
Include copy of this form with next communication to Applicant.

DATE CONSIDERED: 7/06



<b>FORM PTO-1449</b> U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use Several Sheets if Necessary)  <small>(27 CFR 1.500)</small>	<b>ATTORNEY DOCKET NO.:</b> LAA-103US	<b>APPLICATION NO.:</b> 10/607,111
	<b>APPLICANT:</b> Wei Helen Li, et al.	
	<b>FILING DATE:</b> June 27, 2003	<b>GROUP:</b> NYA

U.S. PATENT DOCUMENTS						
EXAMINER'S INITIAL	PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
KS	4,607,091	08/1986	Schreiber	528	96	
↑	4,806,267	02/1989	Culbertson, et al.	252	182.23	
	5,021,484	06/1991	Schreiber, et al.	524	100	
	5,200,452	04/1993	Schreiber	524	398	
	5,443,911	08/1995	Schreiber, et al.	428	413	
↓	5,543,516	08/1996	Ishida	544	69	
KS	6,207,786 B1	03/2001	Ishida, et al.	528	94	

	DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUB CLASS	TRANSLATION	
						YES	NO
KS	0 323 142 B1	09/1993	EPC	C08L	71/00		
KS	0 518 060 A2	05/1992	EPC	C08G	73/10		

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)						
KS			S. Rimdusit and H. Ishida, "Development of New Class of Electronic Packaging Materials Based on Ternary System of Benzoxazine, Epoxy, and Phenolic Resin," Polymer, 41, 7941-49 (2000) <i>Dec 2000</i>			
↑			H. Ishida and D. Allen, "Mechanical Characterization of Copolymers based on Benzoxazine and Epoxy", Polymer, Vol. 37, No. 20, pp. 4487-4495 (1996) <i>Dec</i>			
			H. Ishida and Y. Rodriguez, "Curing Kinetics of a New Benzoxazine-Based Phenolic Resin by Differential Scanning Calorimetry", Polymer, Vol. 36, No. 16, pp. 3151-3158 (1995) <i>Dec 2000</i>			
			H. Kim and H. Ishida, "A Study on Hydrogen-Bonded Network Structure of Polybenzoxazines" J. Phys. Chem. A 106, pp. 3271-3280 (2002)			
			X. Liu and Y. Gu, "Study on the Volumetric Expansion of Benzoxazine Curing with Different Catalysts", J. Appl. Sci., Vol. 84, pp 1107-1113 (2001) <i>Dec 2000</i>			
			S. Rimdusit and H. Ishida, "Gelation Study of High Processability and High Reliability Ternary Systems based on Benzoxazine, Epoxy, and Phenolic Resins for an Application as Electronic Packaging Materials", Rheol Acta 41, pp. 1-9 (2002) <i>Dec</i>			
			H. Kim, H. Ishida, "Study on the Chemical Stability of Benzoxazine-Based Phenolic Resins in Carboxylic Acids", J. Appl. Polym. Sci., Vol. 79, pp. 1207-1219 (2001) <i>Dec</i>			
			H. Ishida, D. J. Allen, "Gelation Behavior of Near-Zero Shrinkage Polybenzoxazines", J. Appl. Polym. Sci., Vol. 79, 406-417 (2001) <i>Dec 2000</i>			
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KS			H. Ishida, D.P. Sanders, "Regioselectivity and Network Structure of Difunctional Alkyl-Substituted Aromatic Amine-Based Polybenzoxazines", Macromolecules, 33, 8149-8157 (2000) <i>Dec 2000</i>			

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KS		S. B. Shen and H. Ishida, "Dynamic Mechanical and Thermal Characterization of High-Performance Polybenzoxazines", J. Polym. Sci.: Part B Polym. Phys., Vol. 37, 3257-3268 (1999) Dec 1999
↑		S. Rimdusit and H. Ishida, "Synergism and Multiple Mechanical Relaxations Observed in Ternary Systems Based on Benzoxazine, Epoxy, and Phenolic Resins", J. Polym. Sci.: Part B: Polym. Phys., Vol. 38, 1687-1698 (2000) Dec 2000
		J. Dunkers, H. Ishida, "Reaction of Benzoxazine-based Phenolic Resins with Strong and Weak carboxylic Acids and Phenols as Catalysts", J. Polym. Sci.: Part A: Polym. Chem., Vol. 37, 1913-1921 (1999) Dec 1999
		X. Zhang, A. C. Potter and D. H. Solomon, "The Chemistry of Novolac Resins - V. Reactions of Benzoxazine Intermediates", Polymer, Vol. 39, 399-404 (1998) Dec
		X. Zhang and D. H. Solomon, "The Chemistry of Novolac Resins - VI. Reactions Between Benzoxazine Intermediates and Model Phenols", Polymer, Vol. 39, No. 2, pp. 405-412 (1998) Dec 1998
		Y. Wang and H. Ishida, "Development of Low-Viscosity Benzoxazine Resins and Their Polymers", J. Appl. Polym. Sci., Vol. 86, pp. 2953-2966 (2002) Dec
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		T. Agag and T. Takeichi, "Novel Benzoxazine Monomers Containing p-Phenyl Propargyl Ether: Polymerization of Monomers and Properties of Polybenzoxazines", Macromolecules, 34, pp. 7257-7263 (2001) Dec 2001
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		H. Kimura, et al., "Epoxy Resin Cured by Bisphenol A. Based Benzoxazine", J. of Appl. Polym. Sci., Vol. 68, 1903-1910 (1998) Dec 1998
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		ULTEM 2000 (CAS Reg. No. 61128-46-9) (2003) Dec 2003
✓		W. J. Burke, et al., "A new Aminoalkylation Reaction. Condensation of Phenols with Dihydro-1, 3-Aroxazines", J. Org. Chem., Vol. 30(10), pp. 3423-3427 (1965) Dec
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KS		Raymond A. Pearson, "Toughening Epoxies Using Rigid Thermoplastic Particles", American Chemical Society, pp. 405-425 (1993) Dec 1993

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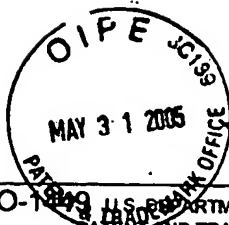
<b>FORM PTO-1449</b> U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (Use Several Sheets if Necessary)  (7/97) (G.N.)	<b>ATTORNEY DOCKET NO.:</b> LAA-103US	<b>APPLICATION NO.:</b> 10/607,111
	<b>APPLICANT:</b> Wei Helen Li, et al.	
	<b>FILING DATE:</b> June 27, 2003	<b>GROUP:</b> NYA

U.S. PATENT DOCUMENTS							
EXAMINER'S INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
KS		2003/018131	01.23.03	Davis, et al.	525	107	
KS		6,323,270	11/2001	Ishida, et al.	524	445	

NON-U.S. PATENT DOCUMENTS								
		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
KS		2003 082117	19.03.03	JP	C08J	5/04		
		1259830	01.06.99	JP	C08F	242-00	Abstract	
		WO 03/013820	02.20.03	PCT	B29C	39/10		X
		9411852.5	10.28.00	CN	C08L	61/06		
		1 408 152	04.01.04	EP	D06M	15/55		
		1 415 782	06.05.04	EP	B29C	39/10		
		10 3010678	24.11.98	JP	C08L	61/34	Abstract	
		2000 273291	03.10.00	JP	C08J	5/24	Abstract	
		06 345898	20.12.94	JP	C07D	265/16	Abstract	
KS		0 458 739	26.04.91	EP	C008L	61/34		X

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)				
KS			N. Dansiri, et al., "Resin Transfer Molding of Natural Fiber Reinforced Polybenzoxazine Composites", J. Soc. of Plast. Engs., 23(3), 352-360, (2002) Dec	
KS			Y. Gu, et al., "New Matrix based on Benzoxazine for Resin Transfer Molding (RTM and their Composites", Fuhe Cailliao Xuebao, 17(4), 32-37 (2000) (Abstract) Dec	
KS			J. Jang, et al. "Toughness Improvement of Carbon-Fibre/Polybenzoxazine Composites by Rubber Modification", Composites Sci. and Tech., 60, 3, 457-463 (2000) (Abstract) Dec 2000	

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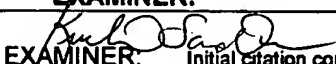


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	<b>APPLICANT:</b> Wei Helen Li, et al.	
	<b>FILING DATE:</b> June 27, 2003	<b>GROUP:</b> 1771

U.S. PATENT DOCUMENTS							
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							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)				
KS			T. Takeichi, et al, "Synthesis and Properties of Polybenzoxazine Based Composites", Recent Res. Devel. Polymer Science, 4, 85-105 (2000) De	

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	<b>APPLICANT:</b> Wei Helen Li, et al.	
	<b>FILING DATE:</b> June 27, 2003	<b>GROUP:</b> NYA

U.S. PATENT DOCUMENTS							
EXAMINER'S INITIAL		PATENT NUMBER	ISSUE DATE	PATENTEE	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
AS		6,534,179 B2	03/2003	Japp, et al.	428	413	

		DOCUMENT NUMBER	PUBLICATION DATE	COUNTRY OR PATENT OFFICE	CLASS	SUB CLASS	TRANSLATION	
							YES	NO

OTHER DOCUMENTS (Including Author, Title, Date, Relevant Pages, Place of Publication)			

<b>EXAMINER:</b> <i>Kuell J. J. J.</i>	<b>DATE CONSIDERED:</b> 7/1/06
<b>EXAMINER:</b> Initial citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.	